

Mr. Michael Houlditch
Superior Aluminum Alloy, L.L.C.
14214 Edgerton Road
P.O. Box 678
New Haven, IN 46774

Re: 003-12927
First Administrative Amendment to
SSM 003-11927-00286

Dear Mr. Houlditch:

Superior Aluminum Alloy, L.L.C. was issued a permit on June 7, 2000 for a secondary aluminum smelting operation. A letter requesting to add a new baghouse (baghouse N), re-configure existing control equipment, and clarify testing requirements accordingly was received on November 20, 2000. This change is approved as it will result in no change in allowable or potential emissions. Pursuant to the provisions of 2-7-11 the permit is hereby administratively amended as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (1) One (1) new natural gas-fired reverberatory furnace, identified as furnace #3, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by either baghouse ~~L E~~ or baghouse ~~F~~, and exhausting to stack ~~L E or F~~;
- (2) One (1) new natural gas-fired reverberatory furnace, identified as furnace #4, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse ~~N E~~ and exhausting to stack ~~N E~~;
- (3) One (1) new natural gas-fired rotary furnace, identified as furnace M, with a maximum capacity of 6 tons of aluminum scrap per hour and a maximum heat input capacity of 12.0 million British thermal units per hour, with emissions controlled by baghouse ~~N E~~ and exhausting to stack ~~N E~~; and

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The aluminum melting process, consisting of the following:

- (1) One (1) new natural gas-fired reverberatory furnace, identified as furnace #3, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by ~~either baghouse L E or baghouse F~~, and exhausting to stack ~~L E or F~~;
- (2) One (1) new natural gas-fired reverberatory furnace, identified as furnace #4, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse **N E** and exhausting to stack **N E**;
- (3) One (1) new natural gas-fired rotary furnace, identified as furnace M, with a maximum capacity of 6 tons of aluminum scrap per hour and a maximum heat input capacity of 12.0 million British thermal units per hour, with emissions controlled by baghouse **N E** and exhausting to stack **N E**; and
- (4) Six (6) melt pot stands each with two natural gas-fired burners rated at 1.5 million British thermal units per hour each, identified as melt pot burners #13-24, with emissions uncontrolled.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the following conditions shall apply:

- (1) The PM emissions from baghouses **L**, **E** and **F** (controlling reverberatory furnaces #1, #2, and #3) combined shall not exceed 2.408 pounds per hour.
- (2) The PM10 emissions from baghouses **L**, **E** and **F** (controlling reverberatory furnaces #1, and #2, and #3) combined shall not exceed 2.408 pounds per hour.
- (3) The NOx emissions from reverberatory furnace #3 charging and melting shall not exceed 3.50 pounds per hour.
- (4) The PM emissions from baghouse **N E** (controlling the new rotary furnace and the new reverberatory furnace #4) shall not exceed 1.204 pounds per hour.
- (5) The PM10 emissions from baghouse **N E** (controlling the new rotary furnace and the new reverberatory furnace #4) shall not exceed 1.204 pounds per hour.

- (6) The NOx emissions from reverberatory furnace #4 charging and melting shall not exceed 3.50 pounds per hour.

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Superior Aluminum Alloy, L.L.C.
New Haven, Indiana 46774

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- (7) The NOx emissions from the rotary furnace M shall not exceed 1.5 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 and 40 CFR 52.21 shall not apply.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)]

Within 180 days after issuance of this permit, the Permittee shall perform PM and PM10 testing on baghouses E, F, ~~and L and N~~, and NOx, HCl, and D/F testing on each of the reverberatory furnaces #3, #4, and rotary furnace M, using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.1.1, D.1.3, and D.1.4. When testing baghouses E and F, ~~both all three~~ reverberatory furnaces (~~#1 and #2, and #3~~) shall be operated at 95% or more of their maximum design capacities. When testing baghouse L, the reverberatory furnace ~~#34 and the rotary furnace M~~ shall be operated at 95% or more of ~~its their~~ maximum design capacities. **When testing baghouse N, the rotary furnace M and the reverberatory furnace #4 shall be operated at 95% or more of its maximum design capacity.** PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.7 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510 the following conditions shall apply to the reverberatory furnaces #3 and #4 and rotary furnace M:

- (1) The furnaces shall be controlled by baghouses with continuous lime injection system. The baghouses ~~E or F L~~ for PM control shall be in operation and control emissions from the furnace #3 at all times when the furnace is in operation. It is acceptable to operate only one of the baghouses E or F if only one of the ~~two three~~ reverberatory furnaces ~~#1 and #2; or #3 is~~ **are** operating. If ~~both two or more~~ of the reverberatory furnaces ~~#1 and #2; or #3~~ **are** operating, then both baghouses E and F must be operated. Baghouse L shall be in operation and control emissions from the reverberatory furnace ~~#34 and the rotary furnace M~~ at all times when the furnaces ~~is are~~ **are** in operation. **Baghouse N shall be in operation and control emissions from the reverberatory furnace #4 and the rotary furnace M at all times when the furnaces are in operation.**

D.1.8 Visible Emissions Notations

- (a) Visible emission notations of the baghouse E, F, ~~L~~, and ~~E N~~ stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

D.1.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses E, F, ~~L~~, and ~~E N~~ used in conjunction with the furnaces, at least once per shift when any of the furnaces are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 and 4.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mike Pring, ERG, P.O. Box 2010, Morrisville, North Carolina 27560, or call (919) 468-7840 to speak directly to Mr. Pring. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
ERG/MP

cc: File - Allen County
U.S. EPA, Region V
Allen County Health Department
Air Compliance Section Inspector - Jennifer Schick
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Superior Aluminum Alloys, L.L.C
14214 Edgerton Road
New Haven, Indiana 46774**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 003-11927-00286	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 7, 2000

First Administrative Amendment: 003-12927	Pages Affected: 3, 14, 15, 16, 21
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates stationary secondary aluminum smelting operation, which is one of the 28 listed source categories pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

Responsible Official: Al Reinhart
Source Address: 14214 Edgerton Road, New Haven, Indiana 46774
Mailing Address: 14214 Edgerton Road, New Haven, Indiana 46774
Phone Number: Mike Houlditch (219) 749-7599
SIC Code: 3314
County Location: Allen
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Minor Source under PSD; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

- (1) One (1) new natural gas-fired reverberatory furnace, identified as furnace #3, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse L, and exhausting to stack L;
- (2) One (1) new natural gas-fired reverberatory furnace, identified as furnace #4, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse N and exhausting to stack N;
- (3) One (1) new natural gas-fired rotary furnace, identified as furnace M, with a maximum capacity of 6 tons of aluminum scrap per hour and a maximum heat input capacity of 12.0 million British thermal units per hour, with emissions controlled by baghouse N and exhausting to stack N; and
- (4) Six (6) melt pot stands each with two natural gas-fired burners rated at 1.5 million British thermal units per hour each, identified as melt pot burners #13-24, with emissions uncontrolled.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22); and

- (4) Records of preventive maintenance.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

- (a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this approval, any semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1 (34).
- (d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

The aluminum melting process, consisting of the following:

- (1) One (1) new natural gas-fired reverberatory furnace, identified as furnace #3, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse L, and exhausting to stack L;
- (2) One (1) new natural gas-fired reverberatory furnace, identified as furnace #4, with a maximum capacity of 14 tons of aluminum scrap per hour, a maximum heat input capacity of 28.0 million British thermal units per hour, and a maximum chlorine flux of 10233 pounds per eight-hour charge, with emissions controlled by baghouse N and exhausting to stack N;
- (3) One (1) new natural gas-fired rotary furnace, identified as furnace M, with a maximum capacity of 6 tons of aluminum scrap per hour and a maximum heat input capacity of 12.0 million British thermal units per hour, with emissions controlled by baghouse N and exhausting to stack N; and
- (4) Six (6) melt pot stands each with two natural gas-fired burners rated at 1.5 million British thermal units per hour each, identified as melt pot burners #13-24, with emissions uncontrolled.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable, the following conditions shall apply:

- (1) The PM emissions from baghouses L, E and F (controlling reverberatory furnaces #1, #2, and #3) combined shall not exceed 2.408 pounds per hour.
- (2) The PM10 emissions from baghouses L, E and F (controlling reverberatory furnaces #1, and #2, and #3) combined shall not exceed 2.408 pounds per hour.
- (3) The NOx emissions from reverberatory furnace #3 charging and melting shall not exceed 3.50 pounds per hour.
- (4) The PM emissions from baghouse N (controlling the new rotary furnace and the new reverberatory furnace #4) shall not exceed 1.204 pounds per hour.
- (5) The PM10 emissions from baghouse N (controlling the new rotary furnace and the new reverberatory furnace #4) shall not exceed 1.204 pounds per hour.
- (6) The NOx emissions from reverberatory furnace #4 charging and melting shall not exceed 3.50 pounds per hour.
- (7) The NOx emissions from the rotary furnace M shall not exceed 1.5 pounds per hour.

Therefore, the requirements of 326 IAC 2-2 and 40 CFR 52.21 shall not apply.

D.1.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the reverberatory furnaces #3 and #4 and rotary furnace M except when otherwise specified in 40 CFR Part 60, Subpart LLL.

D.1.3 Secondary Aluminum Smelting Limits [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1505, the following conditions shall apply to the reverberatory furnaces #3 and #4 and rotary furnace M:

- (1) Identification, emission limits and means of compliance shall be posted on the reverberatory furnaces #3 and #4 and rotary furnace M.
- (2) The PM emissions from each furnace shall not exceed 0.40 pounds per ton of feed.
- (3) The PM emissions from each furnace shall not exceed 10% opacity if PM compliance is via continuous opacity monitor.
- (4) The HCl emissions from each furnace shall not exceed 0.40 pounds per ton of feed.
- (5) The total Polychlorinated dibenzofurans (D/F) emissions from each furnace shall not exceed 15 ug/Mg of feed.

D.1.4 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

- (a) The particulate matter (PM) emissions from each of the reverberatory furnaces #3 and #4 shall not exceed 24.0 pounds per hour when operating at a process weight rate of 14.0 tons of metal per hour.
- (b) The particulate matter (PM) emissions from each of the rotary furnace M shall not exceed 13.6 pounds per hour when operating at a process weight rate of 6.0 tons of metal per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)]

Within 180 days after issuance of this permit, the Permittee shall perform PM and PM10 testing on baghouses E, F, L and N, and NO_x, HCl, and D/F testing on each of the reverberatory furnaces #3, #4, and rotary furnace M, using methods as approved by the Commissioner, in order to demonstrate compliance with Conditions D.1.1, D.1.3, and D.1.4. When testing baghouses E and F, both reverberatory furnaces (#1 and #2) shall be operated at 95% or more of their maximum design capacities. When testing baghouse L, the reverberatory furnace #3 shall be operated at 95% or more of its maximum design capacities. When testing baghouse N, the rotary furnace M and the reverberatory furnace #4 shall be operated at 95% or more of its maximum design capacity. PM10 includes filterable and condensable PM10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.7 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510 the following conditions shall apply to the reverberatory furnaces #3 and #4 and rotary furnace M:

- (1) The furnaces shall be controlled by baghouses with continuous lime injection system. The baghouse L for PM control shall be in operation and control emissions from the furnace #3 at all times when the furnace is in operation. It is acceptable to operate only one of the baghouses E or F if only one of the two reverberatory furnaces #1 and #2 is are operating. If both of the reverberatory furnaces #1 and #2 are operating, then both baghouses E and F must be operated. Baghouse L shall be in operation and control emissions from the reverberatory furnace #3 all times when the furnace is in operation. Baghouse N shall be in operation and control emissions from the reverberatory furnace #4 and the rotary furnace M at all times when the furnaces are in operation.
- (2) The owner or operator must install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device; and inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in §63.1506(c) and record the results of each inspection.
- (3) The owner or operator of an affected source or emission unit using a fabric filter or lime-injected fabric filter to comply with the requirements of this subpart must install, calibrate,

- (F) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:
 - (i) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (G) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (H) Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan for each group 1 furnace not equipped with an add-on air pollution control device.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Visible Emissions Notations

- (a) Visible emission notations of the baghouse E, F, L, and N stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.9 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses E, F, L, and N used in conjunction with the furnaces, at least once per shift when any of the furnaces are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within the range of 1.0 and 4.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.